

**The
Proposed Depopulation and Restocking
of the
Tendoy Mountains Bighorn Sheep Herd**

DRAFT Environmental Assessment

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***Montana Fish,
Wildlife & Parks***

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1.0 Purpose of and Need for Action

1.1 Proposed Action and Background Information

1.1.1 Proposed Action -- Montana Fish, Wildlife & Parks (FWP) proposes to depopulate the chronically low-performing Tendoy Mountains bighorn sheep herd, in which disease has become endemic resulting in too few lambs surviving to sustain the population, and restock the area with healthy bighorns. Public hunting would be the principle tool used to depopulate the herd, and healthy bighorns with a migratory behavior from a yet to be determined source would be used for restocking. This is an experimental approach to bighorn management for Montana, but similar projects were done in 2013 in Nevada and Colorado with apparent initial success.

Should this project be approved, FWP would use public hunting in a format similar to existing unlimited sheep districts as the primary tool for bighorn removal. An aggressive harvest strategy with a long hunting season and ample participants would be needed to achieve full removal. Over-the-counter, either-sex bighorn sheep licenses would likely be issued. We further anticipate that it may take at least two years to achieve full removal of the estimated 30-40 bighorns in the area. Bighorns could also be offered to an accredited research facility, if such demand exists.

1.1.2 Bighorn sheep in North America -- Prior to European settlement, bighorn sheep were common in the isolated mountain ranges of southwest Montana and the Continental Divide. Native American pictographs in the Lima Peaks depict bighorn rams and suggest they were important to the tribes that lived and hunted there. European settlement starting in the late 1800s changed things forever for bighorn sheep. Uncontrolled hunting, habitat lost to mining and other activities, and habitat degradation caused by overgrazing were all factors in the decline of bighorn sheep. But worse in the long run were diseases that the settlers' domestic sheep and goats carried (Brewer et al. 2014). Domestic sheep and goats originated 10,000 to 11,000 years ago in Europe and Asia and evolved with the bacterial and viral germs that cause pneumonia, and have become immune to them. But Rocky Mountain bighorn sheep, which also evolved in parts of Asia, migrated to North America between 2.6 million and 11,000 years ago and didn't evolve with same pathogens as their domestic cousins and consequently have no immunity to them. When domestic sheep and goats came to the American west, they introduced deadly new diseases to bighorn populations. Due to all of the above factors, bighorn populations across the west declined precipitously in the late 1800s and early 1900s, and by about 1940 bighorn sheep in Beaverhead County and the Tendoy Mountains were considered extinct (Koch 1941). Restoration efforts for bighorn sheep began in Montana in 1922, and by 2012 a total of 2,870 bighorns had been trapped for management or augmentation (Montana Fish, Wildlife and Parks 2014).

1.1.3 History of bighorn sheep in the Tendoy Mountains -- The Tendoy Mountains herd was initially reintroduced into historic bighorn habitat by releasing 39 sheep from Lost Creek in 1985 and another 14 from Thompson Falls in 1986 (Figure 1, Table 1). These increased to at least 98 animals by 1987, and hunting began in 1988 with 3 legal ram licenses. The herd continued to do well, and 108 animals were seen in 1991. Knowing the disease risks associated with high population density, managers increased licenses to 5 legal rams and 10 adult ewes for the fall of 1993 to begin to curb population growth. Winter surveys in 1993 showed that the herd had

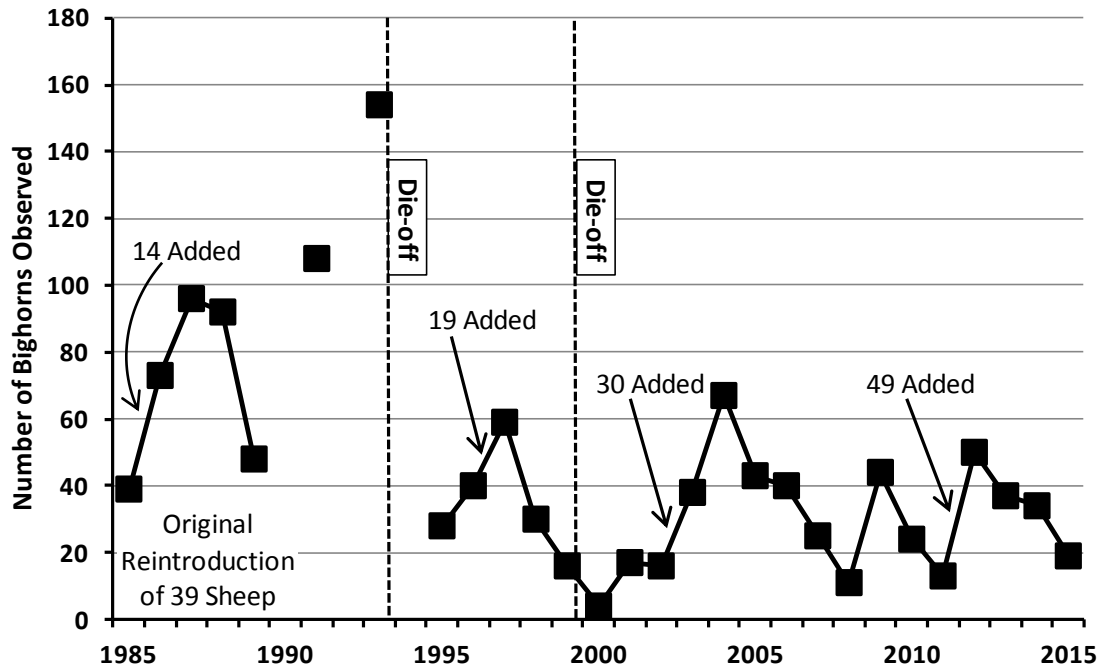


Figure 1. Tendency Mountains bighorn sheep population history showing the original reintroduction, augmentations and die-offs.

Table 1. Tendency Mountains bighorn sheep counts and classifications, 1985-2015.

Year	Total	Ewes	Lambs	Rams	Uncl	Year	Total	Ewes	Lambs	Rams	Uncl
1985	39	26		13		2001	17	9	3	5	
1986	73					2002	16	9	5	2	
1987	96	12	15	27	42	2003	38	20	9	9	
1988	92	39	31	19	3	2004	67	42	13	12	
1989	48	25	13	10		2005	43	20	6	2	15
1990				21		2006	40	23	6	11	
1991	108	31	26	32	19	2007	25	13	5	7	
1992						2008	11	5	2	4	
1993	154	56	27	71		2009	44	23	11	10	
1994						2010	24	13	8	2	1
1995	28			12	16	2011	13	0	0	1	12
1996	40	15	2	23		2012	50	6	2	4	38
1997	59				59	2013	37	22	7	8	
1998	30				30	2014	34	20	1	6	7
1999	16				16	2015	19	12	1	6	
2000	4	1	0	3							

grown to at least 154 animals including 27 lambs. Later that same winter, an all-age pneumonia die off reduced the herd to 28 animals and no lambs survived. Hunting was suspended for the following two years. By 1996, it was felt that limited hunting could resume and 2 legal ram licenses were issued. The herd was augmented in 1997 by adding 19 sheep from Rock Creek, and a total of 59 bighorns were later seen on the range. However, mortality among the sheep that had been added (documented through ear tag returns) showed that a problem still existed. Hunting was cut back to 1 legal ram in 1998. Another pneumonia die-off in 1999 left only 16 observed bighorns in the Tendoy's with respiratory distress evident among survivors. There was no hunting in 2000. In 2002, another 30 sheep from the Rocky Mountain Front were added, and following a count of 67 in 2004 hunting was reauthorized for 2005 with 2 either-sex licenses. In 2006, evidence of respiratory distress, but no documented mortality, was noted and the problem was attributed to high lungworm loads. The population subsequently shrank over the next several years, and by 2011 only 13 bighorns were observed and hunting was cut back to 1 either-sex license in 2012. A third attempt at augmenting the population was made in 2012 with the addition of 49 bighorns from Wildhorse Island. In spite of these repeated efforts over the years to bolster the Tendoy's herd, it continues to struggle, and by February 2015 only 19 bighorns including 1 lamb were found during 2 helicopter and fixed-wing flights.

1.1.4 Pneumonia in bighorn sheep -- Pneumonia in bighorn sheep is poorly understood, but understood much better today than just a few years ago. Bighorns are hearty and tough animals in many ways, but unfortunately they are susceptible to bacteria that were brought here by the domestic sheep and goats of European settlers. Notable among the suite of pneumonia-causing bacteria is *Mycoplasma ovipneumoniae* and members of the Pasteurellaceae family of bacteria including *Pasturella multocida*, *Bibersteinia trehalosi* and *Mannheimia haemolytica*. *Mycoplasma ovipneumoniae* seems particularly notable because it is consistently associated with bighorn die-offs (Besser et al. 2012). Moreover, some of these bacteria are known to produce a leukotoxin that kills white blood cells resulting in the release of substances which cause inflammation and tissue damage. Pneumonia epizootics can ravage bighorn populations, sometimes killing 90% or more of a herd. Since 1984, twenty seven bighorn populations have gone through pneumonia-caused die-off events in Montana with several populations going through more than one event (Montana Fish, Wildlife and Parks 2010, Montana Fish, Wildlife and Parks unpublished data). Most of these populations have failed to recover to pre die-off levels because of chronic poor lamb survival. Bighorn sheep pneumonia is complex, and there is much that remains unknown about the roles of specific pathogens in causing disease. We do know that these bacteria are often passed from domestic sheep to wild bighorns. Domestic sheep that evolved with these pathogens are immune to them, but North American wild sheep, including bighorns, did not evolve with them and have not developed any resistance. Additionally, there is no inoculation or vaccine that will protect bighorn sheep and be passed on to their lambs. A number of research veterinary labs have been working on this, but nothing is currently available. The best management strategy to date is to strive for separation of domestic sheep and goats from bighorn sheep. The Montana Bighorn Conservation Strategy (MFWP 2010) recommends at least 14 miles (23 km) of separation between bighorn and domestic sheep.

The bighorn die offs in the Tendoy's herd of 1993 and 1999 are recorded in the *Montana Bighorn Sheep Conservation Strategy* as "lungworm-pneumonia" (Montana Fish, Wildlife and Parks 2010). A number of bacteria pathogens were isolated by culture from dead sheep during the

1993 die-off including *Pasturella multocida* (Table 2). Molecular diagnostics such as the Polymerase Chain Reaction (PCR) test that is used today to test for *Mycoplasma ovipneumoniae* and leukotoxin were not available in 1993. In fact, leukotoxin testing was not readily available until winter 2014-15. Detection of bacterial pathogens at the time of the Tendoy die-offs relied mostly on culture techniques which are more subject to problems such as sample quality and human error since the bacteria must survive in order to grow on culture. Based on the Tendoy herd's inability to recover and its chronically poor lamb survival, classic symptoms of a herd with an endemic infection, a *mycoplasma* or other bacterial infection is highly suspected. Jennifer Ramsey DVM, FWP's Wildlife Veterinarian, says, "My guess is that we just didn't know to look for *M. ovi*, *M. haemolytica*, *B. trehalosi* etc, and didn't have good techniques available to pick them up. Someone may have seen lungworm and called that the cause of pneumonia, especially since the culture results were unimpressive" (email to John Vore 2/11/2015). Whether or not *Mycoplasma ovipneumoniae* was present in the herd starting in 1993, it is there now because it was found in a dead lamb in 2013 (Table 3).

Table 2. Bacteria* and parasites found in lung and fecal samples from bighorn sheep that died during the Tendoy Mountains herd die off, October and November 1993.

Age and Sex	Location	Bacteria species	Animal Status	Parasites
		cultured from lung tissue		
Adult Female	Little Water	<i>Actinomyces pyogenes</i>	Mortality	
Yearling Male	Little Water	<i>Actinomyces pyogenes</i>	Mortality	
Adult Female	Little Water	<i>Streptococcus</i> spp	Mortality/ dispatched	lungworm, nematodes, strongyles, coccidia- all relatively low levels in fecal sample
Yearling Male	Little Water	<i>Streptococcus</i> spp <i>Actinomyces pyogenes</i>	Mortality	
Yearling Male	Tendoy Mtns.	<i>Pasteurella multocida</i>	Mortality	
Adult Male	Tendoy Mtns.	<i>Staphylococcus</i> spp.; <i>Streptococcus</i> spp.; <i>Escherichia coli</i>	Mortality	lungworm, nematodes- relatively high burden in fecal sample

*In 1993 managers did not know to look for many of the bacteria species now known to be important in bighorn die-offs, particularly *Mycoplasma ovipneumoniae*, nor did they know to look for, and tests were unavailable for, leukotoxins (Jennifer Ramsey, FWP Wildlife Veterinarian, Personal Communication email 2/11/2015).

Many bighorn herds that experience a pneumonia die-off never recover their former numbers and vigor in spite of repeated augmentation efforts. Exactly how this plays out is unknown, but it appears that some post-die-off populations do poorly because surviving sheep carry the disease and the pathogens become endemic in the herd. Even though surviving sheep are asymptomatic, or perhaps disease-resistant, lasting resistance is not passed on to the lambs. Most lambs die

shortly after weaning, and the herd remains static or declines because few lambs survive. This has also been observed in the Tendoy. For example, in July of 2013 biologist Craig Fager observed 18 ewes with four lambs during an antelope survey, but in January of 2014 Craig saw 19 ewes but no lambs during a mule deer survey.

Table 3. Results of a 2012-2013 disease survey of the Tendoy Mountains bighorn sheep herd showing bacteria* species found.

Date	Age	<i>Mannheimia haemolytica</i>	<i>Bibersteinia trehalosi</i>	<i>Mycolasma ovipneumonia</i>	Mortality status
11/23/2013	Adult Male	Positive		Negative	Mortality
9/12/2013	Female Lamb		Positive	Positive	Mortality
2/1/2012	Adult Female		Positive (non-hemolytic) Negative	Negative	live
2/1/2012	Adult Male	Positive (non-hemolytic)		Negative	live
2/1/2012	Adult Female		Postive (non-hemolytic)	Negative	live
2/1/2012	Adult Female		Postive (beta-hemolytic)	Negative	live
2/1/2012	Adult Female		Postive (non-hemolytic)	Negative	live
2/1/2012	Male Lamb		Postive	Negative	live
2/1/2012	Female unaged		Postive	Negative	live
2/1/2012	Adult Male			Negative	live
2/1/2012	Yearling Female		Postive	Negative	live
2/1/2012	Adult Female		Postive	Negative	live

*It is important to note that in 2012-2013 tests were unavailable for leukotoxins associated with many bighorn die-offs (Jennifer Ramsey, FWP Wildlife Veterinarian, Personal Communication email 2/11/2015).

1.1.5 Domestic sheep in the Tendoy -- Domestic sheep and goats are generally recognized as the greatest threats to bighorn sheep due to the potential for disease transmission (The Wildlife Society and American Association of Wildlife Veterinarians 2015). The proximity of domestic sheep to the Tendoy bighorn herd has been and remains a concern. Historically, the Tendoy, Lima Peaks, and Beaverhead Mountains were important domestic sheep producing areas into the latter part of the 20th century when demand for wool and mutton waned. The Bureau of Land Management (BLM) Hidden Pasture Bighorn Habitat Management Plan (1980) suggests unregulated hunting and scabies introduced by domestic sheep were the likely factors in the demise of bighorn sheep in the Tendoy in the 1930's. When bighorns were reintroduced in

1985, there were two domestic sheep allotments on public land plus domestics being run on private land in Big Sheep Basin, all within 14 miles of the bighorns. FWP did not have a bighorn sheep conservation strategy then, and it was an assumption by managers at the time that the bighorns would stay within the 19,200 acres of sheep habitat identified on Dixon Mountain and White Pine Ridge with possible range expansion north into National Forest land in the Tendoy. Bighorn sheep subsequently pioneered suitable habitat in the Tendoy and Lima Peaks. Nobody knows what triggered the 1993 die-off, but we can assume the bighorn distribution far beyond the range anticipated when they were introduced played a role.

However, the distribution of domestics on the landscape has changed considerably since then. Overall, domestic sheep grazing on the Beaverhead-Deerlodge National Forest declined from 139,194 animal units in 1945 to 15,750 animal units in 2003 (Beaverhead-Deerlodge National Forest Land and Resource Management Plan 2009). Specifically in the Tendoy, the last allotments on the Beaverhead-Deerlodge National Forest and the BLM Dillon Field Office within the analysis area were converted to cattle grazing in the spring of 2013. Another ranch with a small, private flock changed ownership, and there are no longer domestic sheep on the property. The US Forest Service and BLM converted 1,200-animal-units in those allotments, the last domestic sheep allotments in the Tendoy and Beaverhead Mountains, to cattle. Today there are no public land domestic sheep allotments on the Montana side of the analysis area. There are still risks of disease transmission as there are private land flocks in Montana, and the US Forest Service administers allotments south and west of the Lima Peaks in Idaho. Bighorn sheep will explore their environment, and rams seek separate range from ewes and lambs outside of breeding season. Moreover, it appears that bighorns also may be attracted to domestic sheep, either by curiosity or because they recognize them as another type of sheep.

FWP met with five known producers of domestic sheep and goats near the project area to seek understanding regarding the proposed action. There are two producers that have several hundred sheep in Big Sheep Basin and one in the Medicine Lodge drainage that has about 60 sheep. All three producers run sheep on private land in relatively flat basins tangent to bighorn habitat. In all three situations, bighorns would have to be moving between the Tendoy Mountains westward across relatively flat areas of uncharacteristic bighorn habitat towards the Beaverhead Mountains to create a contact situation with domestic sheep. Guard dogs are utilized for predator protection and may also mitigate potential contact with bighorns by running them off as potential threats. The domestic goat operations are located at residential dwellings west of Lima and south of Clark Canyon Reservoir. They consist of no more than 5-6 goats for breeding, milk, and meat production.

During discussions with these landowners in early 2015, we learned that they are either not opposed or generally supportive of bighorn sheep in the Tendoy Mountains and of the proposed depopulation /restocking project. However, they were not interested in switching their operations to cattle or in any type of a conservation easement that would not allow domestic sheep. Modifying existing pasture fences to prevent contact between wild and domestic sheep is not a viable option because of the size of the pastures and the expense involved. But landowners were amenable to other mitigation measures such as eliminating bighorns that come in contact with domestics. FWP will employ all of the proactive management actions spoken of by Mitchell et al. (2012) and The Wild Sheep Working Group (2012). These include:

- communicating with landowners or livestock producers to minimize contact between bighorn sheep and domestic sheep or goats,
- removing bighorn sheep that commingle with domestics and fencing domestic sheep herds where feasible to limit interactions between bighorn sheep and domestic sheep or goats and,
- increasing bighorn sheep harvest, especially young two to three year old rams, thereby preventing the spread of disease by wide-ranging young rams on forays or older rams during the rut.

If the project moves forward, FWP will also communicate directly with the Caribou Targhee National Forest in Idaho regarding response protocols in domestic sheep- bighorn contact situations south of the Lima Peaks.

1.1.6 Population density -- Population density is also known to be a risk factor for a pneumonia outbreak among bighorn sheep (Sells 2014). Sells et al. (2014) found that Montana herds at high density had nearly 15 times greater odds of a pneumonia epizootic compared to when those same herds were at low density. Given what we have learned about bighorn sheep management in recent years and that the Tendoy herd suffered its first die-off when it reached a population of ≥ 154 , we would manage this herd in the future to a population less than 150 observed bighorns. This objective is about 50 less than the 180-220 range proposed in the 2010 Conservation Strategy. Based on the work of Berger (1990) and the suggestion of Geist (1975), which was also used by Smith et al. (1991), FWP's Bighorn Sheep Conservation Strategy (2010) considers 125 bighorns to be a minimum viable population. The relatively low population objective is contrary to the concept of metapopulations that connects bighorns occupying habitat patches by dispersal through corridors connecting all available habitats (Hess 1996). The benefits of metapopulations include maintaining or increasing genetic variation, which benefits the individual bighorn and the population (Lacy 1997).

1.1.7 Predation, habitat and other factors -- The project area has a full complement of native predators, excluding grizzly bears. Mountain lions are likely the most common bighorn predator and are capable of preying on all sex and age classes. Their impact on the Tendoy herd is speculative and is likely additive mortality in the face of population declines from endemic disease. The 49 bighorns transplanted from Wildhorse Island in 2012 may have been predisposed to lion mortality because there were no predators on the island they came from and they are largely non-migratory. In 1996, lion predation on radio-collared ewes was documented in a newly-transplanted bighorn population in the Elkhorn Mountains. However because of an effective lion harvest, the level of predation didn't prevent establishment of a viable population which continued to grow approximately 7% annually (Tom Carlsen, retired FWP biologist, personal communication, 4/7/2015). FWP is committed to maintaining harvest opportunity on mountain lions and has proposed harvest quota increases the last two years. The mountain lion harvest quota has been met only once in the last six years in deer and elk hunting districts 300, 302, 328, and 329. Coyotes may also prey on bighorn lambs, and the species is regulated as a predator and can be harvested year-round. Wolves are coursing predators and are not thought to be a significant predator of bighorn sheep based on positive bighorn population growth rates in the vicinity of Yellowstone National Park following wolf reintroduction (White et al. 2008). Although predators do and will continue to take bighorn sheep, given the presence of known

disease factors endemic in the Tendoy herd and the observed symptoms of chronic disease such as chronic poor lamb recruitment and the observations of lambs dying shortly after weaning, we believe that disease is the major factor inhibiting growth and vitality in the herd. It is highly likely that healthy bighorns introduced after the current herd is eliminated would be able to thrive in the Tendoy.

Bighorn habitat is defined by escape cover and adjacent foraging areas within 300 yards. They favor areas that are either open or edge, probably as a predator avoidance strategy. The analysis area is defined by patches of bighorn habitat and densely stocked forest that have not seen significant disturbance in the form of fire in over a century. Active restoration or returning natural fire regimes to the landscape could significantly benefit bighorn sheep and other wildlife. FWP will continue to pursue projects and policies that promote wildlife habitat with land management agencies and cooperating partners. Three such projects identified in 1980 when the area was first analyzed for bighorn habitat suitability will be re-examined for project potential in the summer of 2015.

Competition for space and resources from wildlife and livestock is a major consideration. FWP believes there is a niche for a modest number of bighorns on the landscape. Elk are the most abundant game animal in the area, and they use multiple mountain ranges and vast areas to meet their annual habitat needs. Mule deer have the greatest degree of spatial and habitat overlap with bighorns and have also undergone declines over the last 30 years, due in part to the rise in elk populations and also changes in habitat and available browse species. Mountain goats are a potential competitor with bighorn sheep but only occur in small numbers in the Lima Peaks.

1.1.8 Other cases of depopulation and restocking -- Depopulating a struggling herd and then restocking is not new to bighorn management, but it has not been done in Montana before. The history of Nevada's East Humboldt herd has some striking parallels to Montana's Tendoy Mountains herd. Following an original introduction of 31 sheep in 1992, the East Humboldt herd grew to almost 200 animals by 2009. A pneumonia die off in that year reduced the herd by 90-95%. In spite of efforts to bolster the herd with applications of antibiotics, it did not recover and in 2012 the remaining 15 animals were removed by aerial net-gunning. In February 2013, the range was restocked with 20 animals from Alberta. It is too soon to fully evaluate the success of the restocking effort, but lamb:ewe ratios of 60-70 lambs per 100 ewes in early January 2015 appear promising (Mick Cox, Nevada Department of Wildlife, Personal Communication, 1/12/15).

The Gribbles Park, Colorado, bighorn herd likewise experienced problems with disease and a long-term decline. The herd did well for a number of years with both good lamb production and hunter harvest opportunity. But starting in 2004, the population began to decline. Colorado Parks and Wildlife staff treated the herd repeatedly for multiple diseases without success, and the decline could not be reversed. In 2013, the last remaining 13 ewes were removed to a disease research facility in Wyoming in an attempt to explain the population loss. In March 2014, CPW reintroduced 15 bighorns. To date there has been good survival of the reintroduced sheep, but it is too early to evaluate the reproductive success (Brian Dreher, Colorado Parks and Wildlife, Personal Communication, 3/20/15)

1.2 Objectives of Proposed Action

The objective of the depopulation and restocking project is to have a healthy, productive, and self-sustaining bighorn sheep herd in the Tendoy Mountains.

1.3 Location

The Tendoy Mountains of southwest Montana are approximately 20 miles south of Dillon (Fig. 2). The project area is defined by Bighorn Hunting District 315 that includes the Tendoy Mountains, White Pine Ridge, and the Lima and Red Conglomerate Peaks. Hunting District 315 is 356,444 acres made up of 22.5% private land, 76% public, and 1.5% water in Clark Canyon Reservoir. Private property is primarily agricultural land in grazing or hay production. Residential subdivision is limited to a few areas in the vicinity of Clark Canyon Reservoir and the Lima Peaks. Public land with the analysis area is managed by three agencies and is 41% US Forest Service, 26 % BLM, and 8.5% Montana DNRC.

Bighorn sheep in the project area typically occupy habitats near escape cover in Big Sheep Creek and Muddy Creek south of Dell, the southern portion of the Tendoy, and White Pine Ridge. Small groups also winter in Chute Canyon west of Lima and on Ellis Peak in the center of the Tendoy.

Another herd of bighorn sheep, known as the North Beaverhead Herd in Idaho, occupies some summer and fall range in Montana in the Beaverhead Mountains along the Continental Divide about 5 to 10 miles west of the project area. This herd spends most of the year in Idaho in that state's Hunt Area 30 and is not impaired by disease (Hollie Miyasaki, Idaho Department of Fish and Game, personal communication 03/24/2015). Montana's hunting district 315, which defines the project area, was redrawn in 2015 to exclude the North Beaverhead Herd from any management actions affecting the Tendoy Herd. There has been no documented interaction between the Tendoy and the North Beaverhead herds, but it is certainly possible and perhaps likely. Therefore, the proposed project would also benefit the North Beaverhead herd by eliminating or greatly reducing the risk of contracting disease from the Tendoy herd.

1.4 Relevant Plans

The Montana Bighorn Sheep Conservation Strategy (Fish, Wildlife and Parks 2010) provides general guidance and specific management plans to FWP for bighorn sheep management.

The BLM completed the Hidden Pasture Bighorn Habitat Management Plan MT7-WHA-T13 in 1980. Additional direction for bighorn management is found in Instruction Memorandum No. 98-140 *Revised Guidelines for Management of Domestic Sheep and Goats in Native Wild Sheep Habitats* (BLM 1998) and the Record of Decision and Approved Dillon Resource Management Plan (2006).

U.S. Forest Service direction for the management of bighorn sheep is found in internal publication *A Process for Finding Management Solutions to the Incompatibility Between*

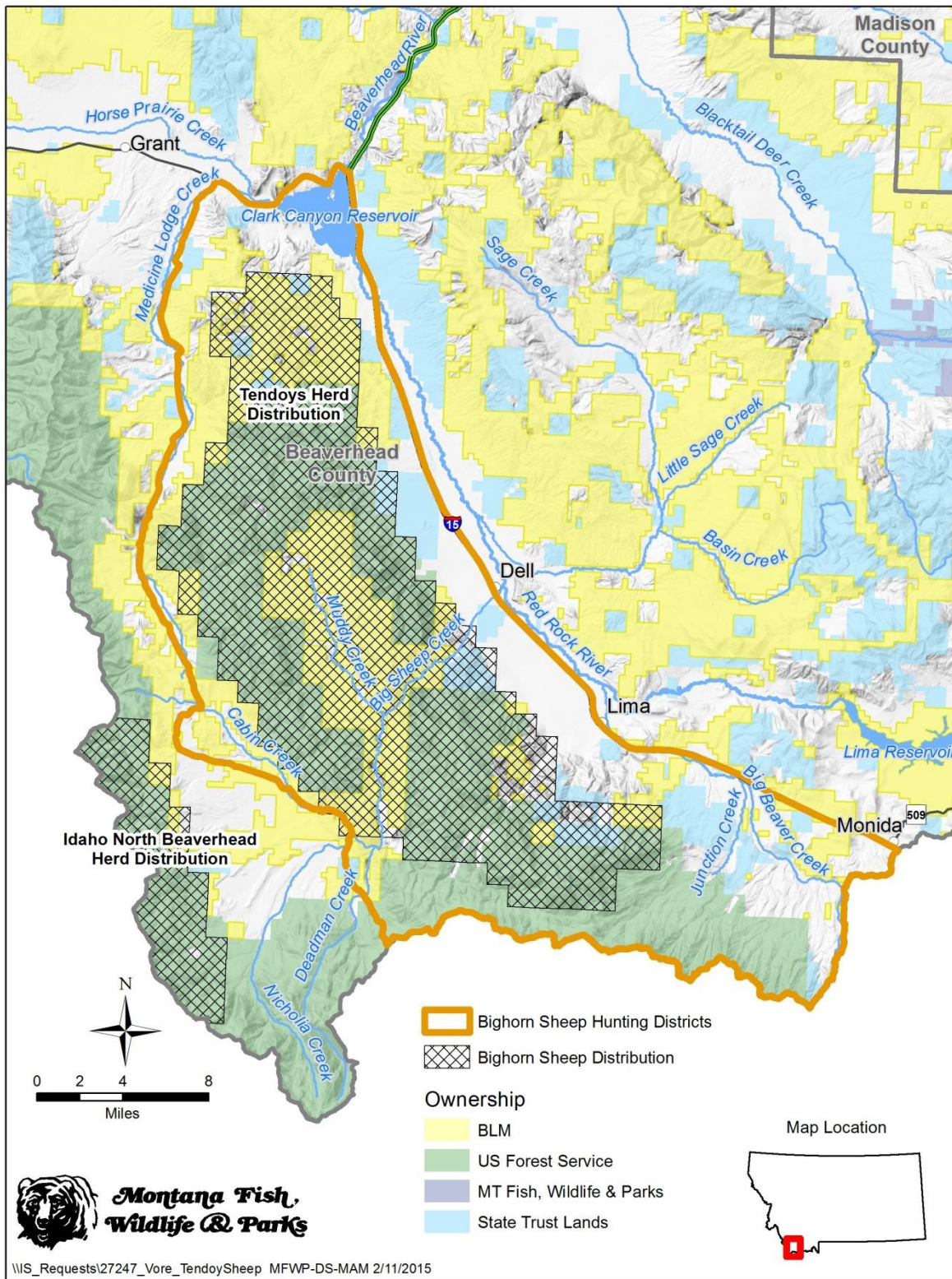


Figure 2. The Tendoy Mountains project area showing the current herd distribution (cross-hatched area) and hunting district 315 boundary.

Domestic and Bighorn Sheep (Schommer and Woolever 2001) and the Beaverhead-Deerlodge National Forest Land and Resource Management Plan (2009).

1.5 Authority

Montana Fish, Wildlife and Parks is granted authority to manage wildlife in the state under MCA 87-1-201. Additional authority for introduction and translocation of wildlife is under 87-5-711(1) and 87-5-713. ARM 36.25.127 addresses domestic sheep grazing on Montana DNRC lands within or adjacent to occupied bighorn habitat.

2.0 Alternatives

2.1 Alternative A : Proposed Action

The proposed action is to depopulate the chronically low-performing Tendoy Mountains bighorn sheep herd in which disease has become endemic and restock the area with healthy bighorns.

Public hunting would be the principle tool used to depopulate the herd. A hunt format similar to the unlimited bighorn areas is proposed except no harvest quota would control the length of hunt and licenses would be valid for either-sex bighorn. Proposed season dates would follow the general season format, with an archery only season from the first Saturday in September through September 14 and a general season opening September 15 and running through the Sunday following Thanksgiving. Mandatory reporting of all harvest through established FWP reporting numbers will be necessary to track harvest. Successful hunters harvesting a ram $\frac{3}{4}$ curl or greater would be subject to a 7-year wait before applying for a bighorn license. By Commission rule, all rams of $\frac{1}{2}$ - curl or greater would have to be “plugged” with an identifying aluminum plug that goes in one of the horns to show that the animal was legally harvested. Any sheep remaining after aggressive public hunting removal would be removed by FWP by whatever means necessary, to include aerial gunning, and the meat donated to a local food bank.

Following confirmation that the bighorns are gone from the project area, the area would be restocked with approximately 50 healthy bighorns from one or more of Montana’s source populations into one or more release sites previously accessed by FWP. The specific source of bighorns is unknown at this time and will depend upon which herd(s) in Montana are in need of a management reduction at that time. All ~50 sheep could be introduced at one time, or we could put in 25-30 sheep per year over the course of 2-3 years. It is possible that bighorns from out of state could be used to restock the Tendoy, although we anticipate using Montana sheep exclusively. At this time, we anticipate a winter reintroduction although the pros and cons of moving sheep in other seasons have been discussed internally by FWP staff.

Donor sheep could be captured in a variety of ways including corral trap, drop nets, and helicopter net gunning. The method selected would depend on the habitat, herd behavior, and logistics involved with a capture among the donor herd sheep. Sheep would be transported in FWP’s specially-designed bighorn sheep trailer and/or in modified horse trailers that have been successfully used for that purpose for many years.

A number of the reintroduced bighorns, but no less than 20% prescribed in the bighorn sheep conservation strategy (Montana Fish, Wildlife and Parks 2010), would be fitted with GPS radio collars to follow their movements, assess habitat use, assess mortality from all sources, and assess risk of disease transmission. These radio collars can either be tracked by periodic computer download of satellite fixes or in the field with conventional VHF antennas.

Given the known threats to bighorns, FWP is suggesting that connectivity is not desirable with all suitable habitats in the project area. A “Bighorn Sheep/Domestic Sheep Commingling Management Zone” could be established that would deny bighorns connectivity with areas of known disease transmission risk, such as domestic sheep and goats or a herd of bighorns with known disease issues. In these zones, FWP or its appointed agents would lethally remove bighorns. Such a management strategy is currently employed outside of bighorn sheep range in the Missouri River Breaks north of the Missouri River and the Little Rockies Mountains in northeast Montana to “minimize commingling and potential disease transmission and breeding between bighorn and domestic sheep” (Fish & Wildlife Commission Agenda Item Cover Sheet, May 14, 2014 commission meeting). One area to be considered here relative to a future bighorn herd in the Tendoy is Garfield Mountain and the Lima Peaks. Bighorns in the current Tendoy herd are known to occasionally visit this area, and the base of Garfield Mountain is within about one mile of domestic sheep allotments on the Caribou Targhee National Forest in Idaho, and the base of the westernmost of the Lima Peaks is within about two miles. It is unlikely that the number of bighorns that would be lethally removed through enforcement of the commingling zone would negatively affect the population. Rather, it is thought that such enforcement would be of benefit to a future herd of bighorns because it is a strategy for minimizing the opportunity for contact between wild and domestic sheep.

The current Tendoy Mountains bighorn sheep are an established herd that has provided wildlife viewing and hunting opportunity to many over the years and, as such, deserves conservation effort. Were bighorns not already existing there, the Tendoy would probably not be considered as a possible reintroduction site because of the proximity to domestic sheep. However, given the fact that there is an existing bighorn herd, that there are fewer domestic sheep on the landscape than just a few years ago, that the mitigation measures spoken of above would be employed, that the herd would be managed to a lower density than previously, and that this is an experimental exercise from which we will learn much about managing bighorns, we believe the best management option for this herd is the proposed depopulation and restocking.

If the reintroduced herd was to suffer a pneumonia-related die off at sometime in the future and diseases again become endemic in the herd, FWP would consider management options at that time. Any such potential future management actions by FWP are outside the scope of this EA.

2.2 Alternative B: No Action

Given the performance of this herd over the past 20 years, under the no action alternative it is unlikely the herd will become healthy and self-sustaining and most likely will die out, probably within a decade. The no action alternative therefore realistically presents a scenario of no bighorn sheep in the Tendoy Mountains.

2.3 Alternatives Considered but Eliminated from Further Analysis

2.3.1 – Capture all existing sheep, test, isolate, and release healthy ones. All bighorn sheep in the Tendoy herd could be captured, tested, held in isolation one from another until test results are known, and animals testing positive for unwanted pathogens euthanized and “clean” animals released back onsite. The logistics and expense of this option are prohibitive and it was not considered further.

2.3.2 – Capture all existing sheep and use them to augment another herd with a disease history. All bighorn sheep in the Tendoy herd could be captured and used to augment another herd with a disease history. The idea is that surviving bighorns in the Tendoy must have some degree to resistance to the pathogens now endemic in the herd. If they could be used to augment a herd with a similar history perhaps enough surviving sheep, a “critical mass”, could be attained whose lambs would survive and rescue the struggling herd. It is known that different herds with a similar disease history respond to various pathogens, habitat and herd behaviors differently, but to date it is unclear how these interact. This is the focus of the current statewide research being conducted by Dr. Robert Garrott at Montana State University (Montana Fish, Wildlife and Parks No Date). Results of that work will help us understand the bighorn-pneumonia complex better, but those results are seven to 10 years in the future. This is a worthwhile alternative and should be pursued in the future, but right now it is too early in the state of our knowledge of the bighorn-pneumonia complex to expend the resources necessary for such an experiment, and it was not considered further.

2.3.3 – Continue periodic augmentation. Another alternative not considered would be to continue periodically augmenting this herd. As spoke to earlier (Section 1.1.3 History of Bighorn Sheep in the Tendoy), this herd has been augmented three times over the past 20 years with a total of 98 bighorns to no avail. It is highly unlikely that further augmentations would have better results. Therefore, this is not considered a suitable alternative because it does not achieve the objective of a healthy, productive, self-sustaining herd.

2.3.4 – Wait until the existing herd dies out and do another reintroduction. Another possible alternative would be to wait until the existing herd dies out as mentioned in the No Action Alternative (2.2 above), and then restore bighorns with a new reintroduction. This was not considered a viable alternative for three reasons. First, it could take a long time for the remaining herd to eventually die out, and it would take much longer to establish a new herd, if one could be established. We anticipate the existing herd would die out in about a decade, but stragglers could hang on for longer. Under the proposed alternative, a new herd could be established in three to four years, ten years earlier than if we waited for the existing herd to die out. Secondly, under this alternative hunters would have the opportunity to harvest sheep that would otherwise eventually die out. Lastly, under this waiting alternative, FWP would likely have to treat the later reintroduction as a totally new one requiring MEPA analysis of the suitability of the area. Given the proximity of domestic sheep and goats in the project area, it is possible that the Tendoy Mountains would not be considered for a new reintroduction if there were not already bighorns there. The proposed project is different because we are considering how best to manage an existing herd of bighorns. Moreover, as mentioned above in 1.1, the landscape now is different relative to domestic sheep than it was in 1985. We view the alternative of waiting until the existing herd dies out and then attempting a new reintroduction,

with all that it would entail and the likelihood of the area being deemed unsuitable, as a much poorer option than the proactive approach represented by the proposed action and it was not considered further.

3.0 Affected Environment & Predicted Environmental Consequences

3.1 Land Use

Alternative A, Proposed Action: Livestock grazing and associated hay production is the primary economy in the analysis area. Public grazing allotments are administered by the BLM, US Forest Service, and Montana DNRC. Public allotments are currently allocated to cattle which are thought to be highly compatible with bighorn sheep (Foreyt 1994). The 1993 die-off was not without controversy in this regard. Exposure to viruses common in cattle were detected in necropsies from carcasses collected during the die-off. The presence of these viruses was determined to not be a causal factor in the die-off.

Hunting recreation is administered by FWP and is a popular pastime in the area. FWP estimates an average 2907 elk and deer hunters annually in Hunting Districts 300 and 302 during the period 2008-2013. Elk hunter days during the same period averaged 11,203 recreation days. Antelope, black bear, fur, mountain lion, moose, wolf, upland bird, and migratory bird hunters all contribute significantly to recreation in the area. Fishing, horn hunting, wildlife viewing, and touring by all modes of transportation from foot to ATV are common recreation pastimes. User created motorized roads and trails are an issue throughout the Tendoy and White Pine Ridge. FWP is working cooperatively with the land management agencies to address travel management as an important element of both wildlife habitat and maintaining a quality hunting experience.

Residential development is minimal within the project area. Isolated parcels of private land are periodically developed as amenity or seasonal dwellings, primarily for recreational use. A study titled *Fiscal Impact Analysis of Future Growth Scenarios for Beaverhead County* was completed in 2007. The study was a planning tool that examined costs associated with roads, law enforcement, and fire protection from broad amenity based development in the county versus concentrating development in areas that are already developed. Little change has been noted in the 8 years since the study was developed, and residential development is not a barrier to bighorns beyond the threats discussed further below.

Oil and gas leases were offered by the BLM, US Forest Service, and Montana DNRC on significant portions of the Tendoy, Lima Peaks, and White Pine Ridge within the last decade. The leases include portions of the known bighorn sheep range including winter range. To date there has been limited seismic exploration but no development of oil and gas resources. If development of a lease is proposed, the land management agency would conduct an environmental review with mitigation stipulations in consultation with FWP. Mineral exploration and extraction activities are currently minimal in the area.

As mentioned above (Section 1.1 – domestic sheep in the Tendoy), domestic sheep and goats are generally recognized as the greatest threats to bighorn sheep due to the potential for disease transmission. FWP would implement all practicable methods to reduce contact between wild

and domestic sheep; many of which are outlined in The Western Association of Fish and Wildlife Agencies (WAFWA), of which Montana is a member, *Recommendations for Domestic Sheep and Goat Management in Wild Sheep Habitat* (Wild Sheep Working Group 2102), and by Mitchell et al. (2012). Also, to minimize the risk of a bighorn sheep that has made contact with domestic sheep returning to the wild herd, current FWP policy is to destroy bighorns that come into contact with domestic sheep or goats. Kill permits that allow a landowner or designated herder to promptly remove bighorns in high risk areas are also an option. Other voluntary agreements that promote separation between bighorns and domestic sheep are possible and include fencing, enhanced herding, and enhanced communication capability in remote areas to promote prompt agency response to potential interspecies contact. Conservation easements that preclude domestic sheep are possible with willing landowners. FWP would seek partnerships with the Wildlife Sheep Foundation and other willing organizations if such opportunity becomes available in the project area. FWP also recognizes that 150 sheep is the maximum bighorn population that the area can reasonably accommodate. Bighorn density is the one variable that can be controlled through enhanced hunting opportunity and offering bighorns as transplant stock to other areas. The restocking effort should also employ GPS radio collars to allow a better understanding of how bighorns use the environment and to assess risk and other mortality factors.

Alternative B, No Action: There would be no impact. The existing bighorn sheep herd would likely die out within a decade from endemic disease.

3.2 Soils

Alternative A, Proposed Action: There would be no impact. No soil disturbing activities are planned. If the project is successful a restored population of no more than 150 bighorn sheep would promote soil conservation through nutrient recycling well within the carrying capacity of available habitat. Montana FWP cooperates with the BLM and Forest Service on habitat improvements which benefit wildlife habitat and other land uses. It is incumbent on these agencies to analyze the impacts to soils prior to implementing management actions. *M. ovi* and other bacteria reside within the respiratory and digestive tract of bighorns and are not anticipated to persist in the soil following depopulation.

Alternative B: There would be no impact.

3.3 Vegetation

Alternative A, Proposed Action: Bighorn sheep would occupy patches of habitat generally associated with steep terrain and escape habitat. Escape habitat is defined as 60% or greater slopes with rock outcroppings, and 95% of bighorn use occurs within 300 meters of escape habitat. They will compete for forage with a number of other species of wildlife and livestock, but given their association with escape habitat will occupy a unique niche. The environment they occupy is generally productive but subject to huge swings based on annual precipitation timing and amounts. Dillon averages 13.06 inches of precipitation annually (WRCC 2015) and is a semi-arid environment. The surrounding mountains generally receive higher amounts of precipitation but have recently also been classified as extreme drought status. Some habitat

within the Tendoy has historically been altered to bolster forage or hay production for livestock. These habitat alterations do not significantly impact bighorn habitat. Further, large portions of the BLM's Hidden Pasture area have no livestock allocation because of the steep terrain and lack of water. Fire suppression over the last 100+ years has had the greatest impact to bighorn habitat by increasing the stocking density of conifer stands and expanding conifer into sagebrush/grassland habitat. Bighorn sheep prefer open or edge habitats. Mountain mahogany is a locally important ungulate browse species that has been severely impacted by a combination of ungulate browse and conifer expansion. Specific projects to improve sheep habitat in the Tendoy have been discussed between the various land management agencies. Three habitat projects identified in 1980 in the Hidden Pasture/Dixon Mountain area will be re-examined for possible implementation in the Big Sheep Watershed Assessment in 2015. Further, the federal agencies have adopted let burn policies for wildfire meeting certain criteria. Such policies could positively influence bighorn habitat over time.

Alternative B, No Action: There would be no impact. Montana FWP anticipates the current population would be extinct within a decade given the low lamb recruitment, and there would be little if any impact on vegetation.

3.4 Wildlife Species

Alternative A, Proposed Action: It is expected that bighorn sheep from both the donor herd and the Tendoy herd would benefit from the proposed action. Donor sheep would be taken from herds in need of population reduction for herd health reasons (see population density, Section 1.1.6 above). To ease acclimatization to a new area, donor sheep would also be selected from a herd that uses similar mountainous habitat to that of the Tendoy. There would be some stress to donor sheep by the process of capture, transportation, and release to a new area. However, FWP has a long history of successfully capturing, moving, and releasing sheep. Once released, it is expected that some of the transplanted sheep will not stay but disperse. This is a common and well known behavior among transplanted animals of many species, and we anticipate that perhaps 25-30% of released sheep will disperse. Decades of experience have taught us that remaining sheep would be expected to thrive in their new environment.

Bighorn sheep in the Tendoy occupy a complex environment occupied by all native wildlife except bison and grizzly bear. Elk, mule deer, antelope, and moose are common big game species. Elk populations have doubled since the 1980's when the initial bighorn introduction was considered. The 2015 elk census showed an all time high population of 1,421 elk in HD 302 (Tendoy) and an additional 918 in HD 300 (Lima Peaks). Elk utilize broad landscapes to meet their annual needs. Many of the elk that winter in the Tendoy Mountains return to the Continental Divide and are resident to Idaho until winter. FWP efforts to reduce elk populations are ongoing. The potential for elk to compete with bighorns, particularly during a harsh winter or during periods of low forage production, cannot be discounted. Mule deer populations have trended down across the west since the 1980's, and the Tendoy and Lima Peaks areas are no exception with a decline in long-term average of about 50% over the last 30 years. Mule deer have the highest habitat overlap with bighorns but the consequences of this overlap are uncertain. Constan (1972) suggested dietary and spatial overlap were possible, particularly in Douglas fir habits, while Singer and Norland (1994) suggested little dietary overlap between bighorn and

mule deer in the northern Yellowstone range. A small population of native mountain goats inhabits the Lima and Red Conglomerate Peaks. FWP is aware of one observation of two mountain goats in the Lima Peaks in 2013. The mountain goat hunting season is currently closed, and forage competition is anticipated to be negligible at current populations. Mountain goats are hypothesized to be dominant over bighorns at higher population and may also be hosts for parasites and other pathogens that could infect bighorn sheep (Garrott 2010).

Mountain lion, black bear, gray wolf, coyote, wolverine, and bobcat have a mixture of classifications (big game, species in need of management, predator, and furbearer) and are common carnivores in the project area. Mountain lions are the most abundant predator and the most likely candidate to consistently prey on bighorns. Their impacts on the bighorn population are entirely speculative but have been documented as significant in some translocated western populations (Rominger et al. 2004). Mountain lions may specialize in prey selection, and the removal of an individual lion may or may not influence overall predation rates (Ross et al. 1997). Four collared bighorn mortalities in the Tendoy Mountains since 2012 were documented, and one was attributed to a lion, 1 was presumed to be disease, and 2 were undetermined cause of death. Mountain lion populations and harvest quotas are evaluated on an annual basis through a variety of indirect indicators including reported conflicts, houndsmen observations, recruitment in big game populations, and other social factors. FWP is currently proposing an increase in the mountain lion harvest quota in the Tendoy and surrounding districts from 6 to 10 lions. Coyotes were identified as a source of bighorn lamb mortality on the National Bison Range in Montana (Hass 1989), but overall are not considered to be a major predator of bighorns where suitable escape terrain is present. Wolves are not known to be significant predators of bighorn sheep based on the positive bighorn population response to wolf reintroduction in Yellowstone National Park (White et al. 2008). Black bear, bobcat, and wolverine are anticipated to be opportunistic predators of bighorn sheep. Golden eagles are capable of predating bighorn lambs and are federally protected under the Migratory Bird Treaty Act of 1918 and the Bald and Golden Eagle Protection Act.

There are six species of sensitive animals in Beaverhead County with a state rank of S2. The western toad, greater sage grouse, dwarf shrew, and black rosy finch occur in the analysis area, and the grizzly bear and northern bog lemming do not. No impact to these species is anticipated. It is anticipated that the proposed action will have little or no impact on other wildlife species.

Alternative B, No Action: The no action alternative would have a negative impact on the bighorn population in the Tendoy because it is expected that the current population will die off from endemic disease in the coming decade.

3.5 Fisheries Species and Water Resources

Alternative A, Proposed Action: There would be no impact to fisheries resources and minimal impacts to water resources. Bighorn sheep are well adapted to arid environments but also require periodic access to water. Ewe and lamb distribution could be somewhat limited by water resources during the summer months. The Big Sheep Creek road parallels the creek for several miles, and there is potential for vehicle collisions in this area. Two collisions involving bighorns have been documented in the past 10 years. Bighorns will also utilize springs, and there is

potential for competition with domestic livestock during the grazing season. The BLM has installed 2 rainwater collecting guzzlers for wildlife in the Tendoy Mountains. To date, the guzzlers have not been monitored to determine the amount of bighorn use they receive.

Alternative B, No Action: No impact.

3.6 Aesthetics and Recreation Opportunities

Alternative A, Proposed Action: There would be a positive impact. Bighorn sheep would be restored for public viewing and hunting opportunity. Hunting would be the primary management tool to maintain bighorns within population and density objectives. Further, FWP recognizes the huge demand for bighorn harvest opportunity and believes public hunters should be the primary means of removing the existing population. Bighorn are a coveted big game species, and the opportunity to harvest a mature ram is generally a once in a lifetime opportunity. Hunting District 315 had 186 applicants for 1 either-sex license in 2013 for an overall 0.54% chance of drawing. In 2014, the drawing odds were 0.34% and the number of applicants rose to 292. Seventeen hunters pursued bighorn sheep in HD 315 since 2005, when the district was reopened after a 5-year closure following the 1999 die-off event. All seventeen hunters successfully harvested bighorn rams, and the average number of days afield was 16.4 per harvest. In 2012, the harvest opportunity was reduced to 1 either-sex license.

Alternative B, No Action: There would be minor impacts. There are few bighorn sheep in the area for wildlife viewing and the district was closed for hunting by Fish and Wildlife Commission action for 2015. The natural die-off of the herd and the elimination of any augmentation efforts by FWP would result in the reduction of hunting and viewing opportunities for bighorns in Southwest Montana.

3.7 Community and Taxes

Alternative A, Proposed Action: Bighorn sheep are a coveted native species with limited distribution in southwest Montana. They have health issues that have proven hard to overcome and in many cases divide user groups and may make the species a liability for some on the landscape. As such, the proposed action is asking the community at large if there is room on the landscape for bighorn sheep. The proposed action is an experimental approach with hunters being the primary management tool for removal of the population.

Bighorn sheep have economic value as evidenced by the Governor's Tag that has been auctioned annually since 1997. Through 2013, the license has generated \$3,445,500 in proceeds that benefit bighorn habitat, research, and survey and inventory efforts. Many of these funds are spent locally on a variety of services and equipment. In 2014, resident bighorn sheep hunters spent an estimated \$140.70 per hunter day while nonresidents spent an estimated \$979.88 (Lewis and King 2014). The estimated value of all non-consumptive wildlife viewing is estimated at \$307 million for the state of Montana in 2015 dollars (Michael Lewis, FWP, Personal Communication, March 10, 2015; USDI FWS et. al 2011). The value of bighorn sheep viewing opportunity in the Tendoy and surrounding mountains is not specifically surveyed and is

therefore unknown, but such activity would presumably grow commensurate with the visibility of a productive population of bighorn sheep.

Alternative B, No Action: There would be minor impacts. The existing bighorn population would likely die out and there would be no community or economic activity associated with the species in the southern portion of Beaverhead County. Bighorns would likely not be proposed for restoration under this scenario.

3.8 Cumulative Effects

Alternative A, Proposed Action: The proposed action is an experimental approach to bighorn management that could result in a restored population of bighorns with implications for other herds that are similarly impaired by endemic disease. FWP recognizes and acknowledges the risks of the proposal but also feels there is little to lose given the trajectory towards extinction of the existing population despite repeated attempts at augmentation. If the project is successful, FWP will have to consider new approaches to bighorn management that include a lower density population and sustained monitoring with GPS radio collars to assess risk as bighorns explore the environment. As mentioned above (Section 2.1), a Bighorn Sheep/Domestic Sheep Commingling Management Zone may be appropriate in the Lima Peaks due to potential contact points with domestic sheep in adjacent Idaho.

If successful, the proposed project could have long-term positive impacts to bighorn sheep and the people who enjoy them in Montana. A healthy and productive herd could support both consumptive and non-consumptive uses and may represent a future source of bighorn sheep for transplanting.

The project area has identified acreage that could be enhanced to promote bighorn and other wildlife habitat. Bighorn are generally associated with open or edge habitat, and a general lack of fire in the area has changed the habitat characteristics over time. FWP supports the BLM and US Forest Service in habitat restoration opportunities and let burn policies that promote habitat that can benefit many species that are dependent on early successional vegetation. Such projects require a lot of resources in personnel, money, and time, are not without risk and will require many decades to implement.

Bighorn sheep would be reintroduced into a complex environment with a number of ungulate competitors and a full suite of predators, excluding grizzly bears. We are assuming there is a niche for up to 150 bighorns within the project area but also acknowledge there is great potential for competition in times of resource scarcity like a severe winter or drought. Predation by mountain lions is a concern that FWP is trying to address over time by increasing harvest quotas and opportunity for archery and general hunters to harvest a mountain lion.

Alternative B, No Action: There would be negative cumulative impacts. The existing population would die out and would likely not be restored. There would be no consumptive or non-consumptive use of the resource, nor would there be the possibility of the Tendoy herd being a source for future transplants.

4.0 Resources Issues Considered but Eliminated from Detailed Analysis

The Montana Environmental Policy Act (MEPA) provides for the identification and elimination from detailed study of issues, which are not significant or which have been covered by a prior environmental review, narrowing the discussion of these issues to a brief presentation of why they would not have a significant effect on the physical or human environment or providing a reference to their coverage elsewhere (ARM 12.2.434(d)). While these resources listed below in 4.1 through 4.4 are important, FWP anticipates they would be unaffected by the proposed action or if there are any effects, those influences could be adequately mitigated as a result these resources were eliminated from further detailed analysis.

4.1 Air Quality

4.2 Noise and Electrical Effects

4.3 Risks and Health Hazards

4.4 Cultural and Historic Resources

5.0 Need for an Environmental Impact Statement

Based on the analysis completed in this EA, FWP has determined an EA is the appropriate level of analysis because the proposed action is anticipated to have few to no impacts to the existing environment such as soil, water, vegetation, wildlife, and social resources. Anticipated impacts may be minor, manageable, or mitigable.

6.0 Public Participation

6.1 Public Involvement

Public notification of the EA release and opportunities to comment will be by:

- A statewide press release;
- Two legal notices in each of these papers: *The Independent Record* (Helena), *The Montana Standard* (Butte), *The Dillon Tribune* (Dillon), *The Bozeman Chronicle* (Bozeman), *The Billings Gazette* (Billings), *The Great Falls Tribune* (Great Falls), *The Daily Interlake* (Kalispell), *The Missoulian* (Missoula), and *The Miles City Star* (Miles City)
- Direct mailing to adjacent landowners and interested parties;
- Public notice on the Fish, Wildlife & Parks web page: <http://fwp.mt.gov>

Copies of this EA will be available for public review at FWP Region 3 Headquarters in Bozeman and on the FWP web site.

A public meeting will be held on May 7, 2015, at 7:00 PM in Dillon, Montana at the Search and Rescue Building, 1116 Highway 41 North. At this meeting the public will have a venue to submit comments and have questions answered by FWP staff. This level of public notice and participation is appropriate for a project of this scope having few limited physical and human impacts.

6.2 Comment Period

The public comment period will extend for (30) thirty days beginning April 17, 2015. Written comments will be accepted until 5:00 p.m., May 15, 2015 and can be mailed to the address below:

Montana FWP
Tendoy Bighorn Sheep Comments
1400 South 19th
Bozeman, MT 59718-5496

or email comments to: tendoybighorncomment@mt.gov

6.3 Timeline of Events

After the close of the public comment period, the FWP R3 Regional Supervisor (Bozeman) will evaluate the comments and prepare a Decision Notice that reviews and responds to public comments and indicates whether or not FWP should proceed with the proposed action. The Decision Notice will be provided to all persons who commented on the proposal, and will be published on the FWP website at <http://fwp.mt.gov/news/publicnotices>. If the Regional Supervisor's Decision notice calls for proceeding with the proposed action, the bighorn removal proposal would then be scheduled for final consideration at the next regularly scheduled monthly meeting of the Montana Fish and Wildlife Commission. The Commission is the final State decision-making body on this proposal.

6.4 Offices & Programs Contributing to the Document

This document was prepared by the Big Game Management Bureau of the Wildlife Division of Montana Fish, Wildlife and Parks.

7.0 EA Preparers

Craig Fager, Dillon Area Wildlife Biologist, Montana Fish, Wildlife & Parks
John Vore, Game Management Bureau Chief, Montana Fish, Wildlife & Parks

Helpful reviews of this EA were done by the following:

Howard Burt, MFWP Region 3 Wildlife Program Manager
Tom Carlsen, retired MFWP wildlife biologist and co-author of *Montana Bighorn Sheep Conservation Strategy*
Rebecca Cooper, MFWP Responsive Management MEPA reviewer
Aimee Fausser, MFWP Legal Council
Quentin Kujala, MFWP, Wildlife Division Bureaus Coordinator
Jennifer Ramsey D.V.M., M.P.V.M., MFWP Wildlife Veterinarian
Mark Sullivan, MFWP Region 6 Wildlife Program Manager

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